



# WBS 1.6 - Experiment Infrastructure: Design Status Discussion

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Prepared for the  
MicroBooNE Collaboration Meeting 6/17/11

# Enclosure Design - Progress

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- ❑ CMT is working on the facility design. As reported at the last collaboration meeting, the Purchase Order for design services was modified to complete the design as fast as possible. The design is scheduled to be complete by mid August.
- ❑ CMT Progress Meetings were held on May 25<sup>th</sup> and June 9<sup>th</sup>. The next CMT Progress Meeting is Scheduled for Monday June 20<sup>th</sup>. Work is moving ahead rapidly.
- ❑ A 60% review is scheduled for early July.
- ❑ The soil borings requested by CMT were completed June 3<sup>rd</sup>.
- ❑ At the May 25<sup>th</sup> progress meeting FESS personnel presented some comments based upon their recent reviews of this work. This led to a few changes in the design basis. The most significant change included the recognition of the code requirement that any structure more than 30 feet deep (MicroBooNE is 40 feet deep) requires two independent exits if it is not to be classified a “confined space.” CMT was directed to include a second “stair tower” reflected across the cylinder. The cryogenics staff at Fermilab is revising the equipment layouts in conformity with this change. The above changes were incorporated in the drawings presented at the June 9<sup>th</sup> meeting

# MicroBooNE Facility Design

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- ❑ As reported at the last collaboration meeting, CMT and FESS architects have relocated the electronics room. This relocation is accepted.
- ❑ A formal “life safety” report on the design as it now exists has been requested from a consultant.
- ❑ Fermilab MAY change the facility to a GPP Project.
- ❑ Information on the exact elevation of the neutrino beam center at the proposed cylinder center STILL needs to be forwarded to CMT immediately.
  - ❑ Given the accuracy desired, this has proven not be trivial
  - ❑ Information presently in-hand can locate BNB centerline on the order of one or two feet – x,y and z.
  - ❑ We are expecting the “best that metrology can do” Monday the 20<sup>th</sup>.

# What's Happening Now and Next

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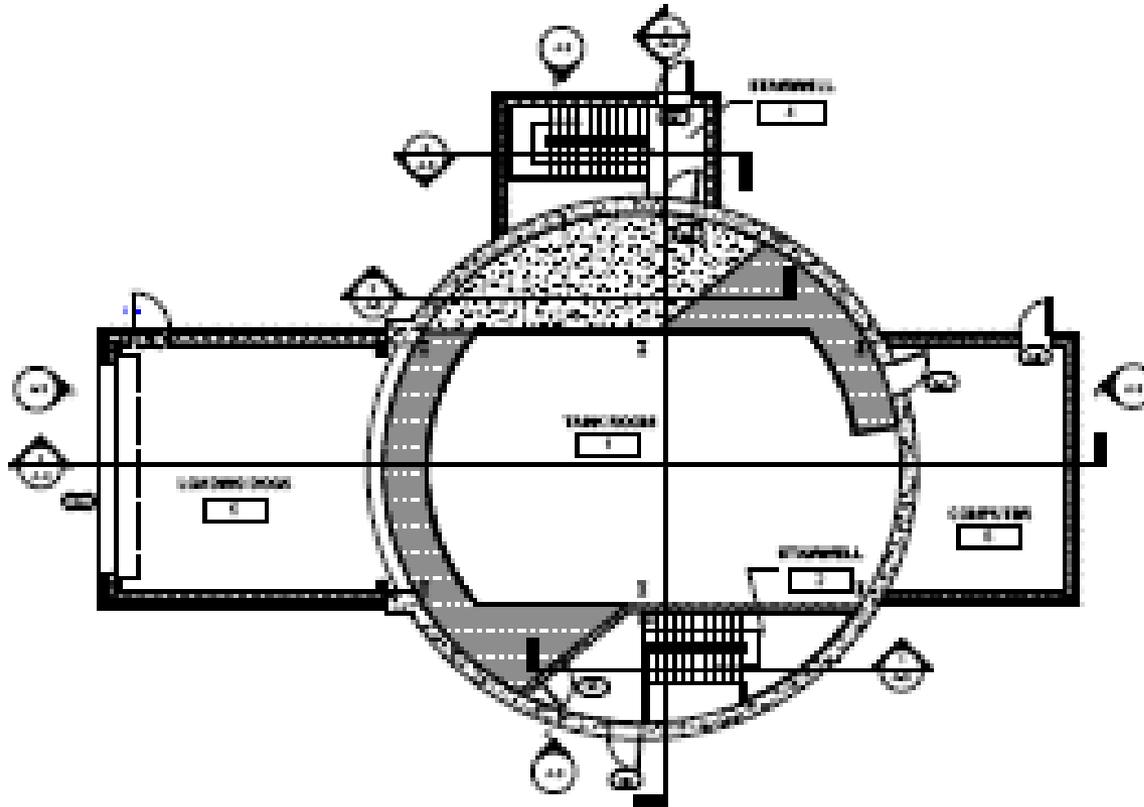


- ❑ Current CMT Design efforts:
  - One piece removable steel frame roof with easy weather seals
  - Platform supports and materials
  - Location of exterior pads for electrical and HVAC equipment
- ❑ We will push the CMT work as fast as possible.
- ❑ We should conduct the WBS 1.6 Enclosure Internal Review!
  - Include location accuracy; equipment layout; support needs of the detector elements
- ❑ We will prepare draft purchase reqs for a number of items that may be considered for long-lead purchase to present at the CD 2/3A Review.
- ❑ We are considering entry requirements with energy conservation in mind.



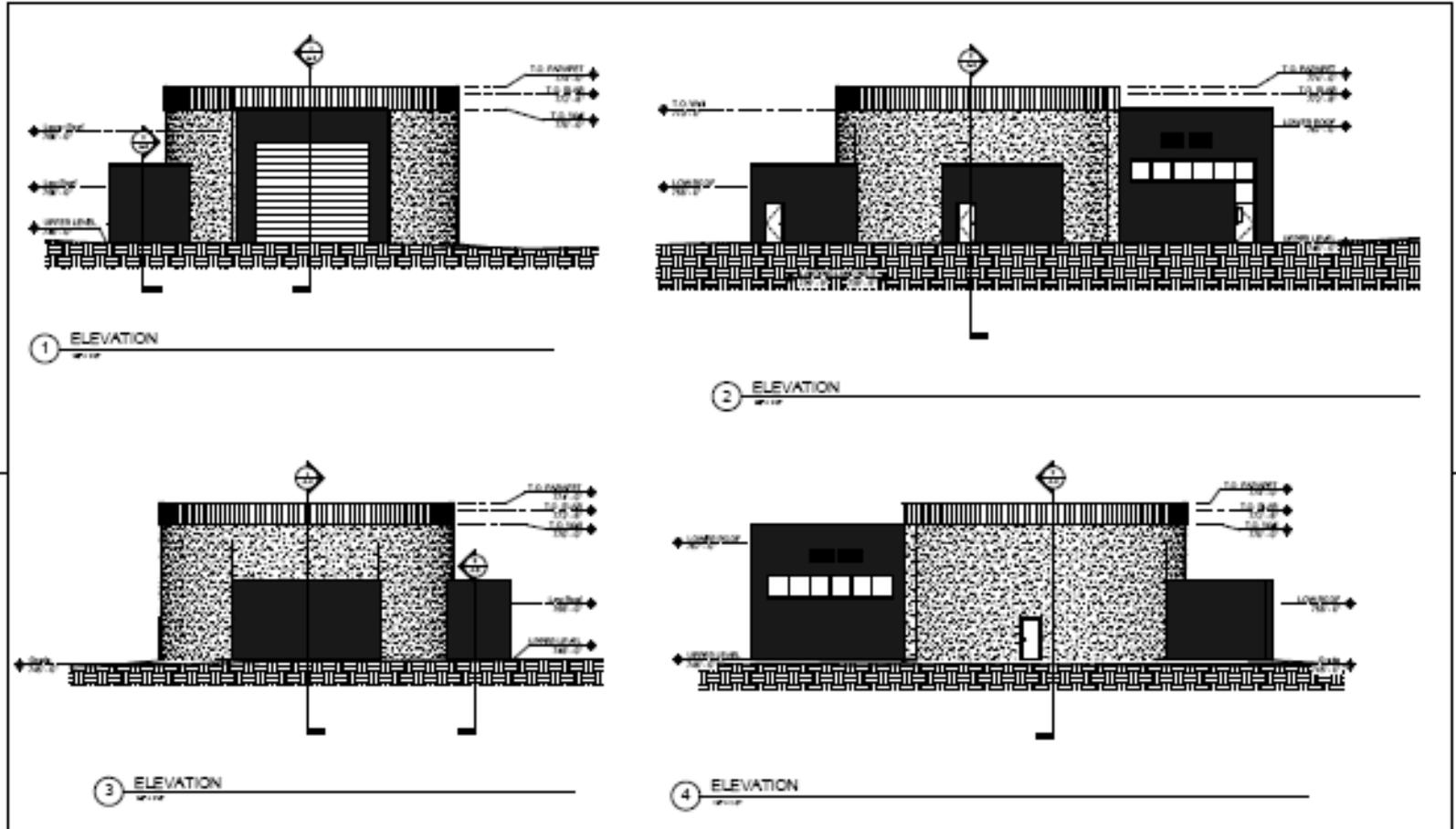


# Drawing from CMT – Overall Plan View



1 UPPER LEVEL PLAN: ELEVATION 745'-0"  
1/21/11

# Drawing from CMT – Exterior Elevations

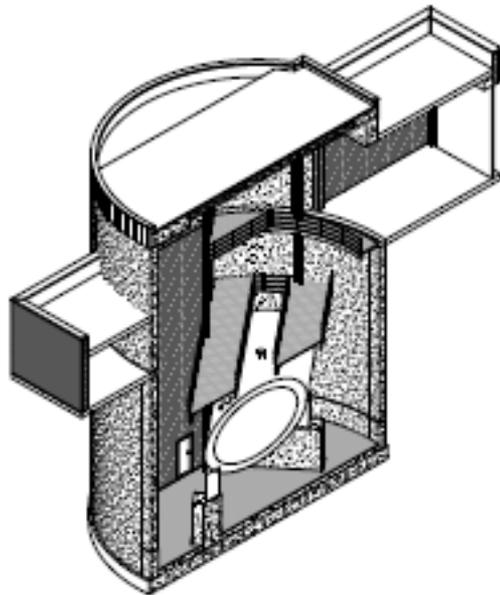


<p><b>CMT</b> COMPUTATIONAL MODELING TOOL</p>	<p>DESIGNED BY: [ ]</p> <p>DATE: [ ]</p> <p>SCALE: [ ]</p> <p>PROJECT: [ ]</p> <p>REVISIONS:</p>	<p>SCALE: 1/4" = 1'-0"</p>	<p><b>FERMI NATIONAL ACCELERATOR LABORATORY</b></p> <p>DEPARTMENT OF PHYSICS</p> <p><b>MICROBOONE</b></p> <p>ELEVATIONS</p> <p>FIGURE C-7-82 A-3</p>
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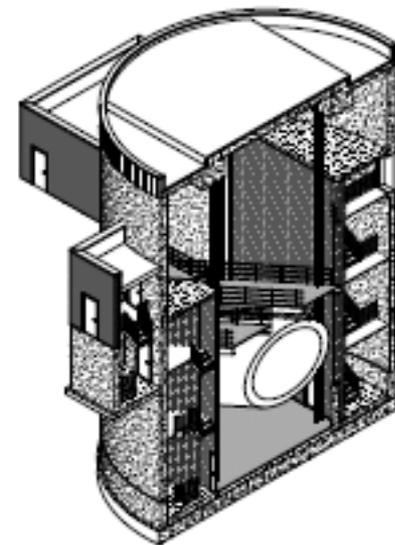




# Drawing from CMT – Interior 3D Sections



① 3D SECTION 1



② 3D SECTION 2

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# Final Comments

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- ❑ I will try to modify the TDR in real time as drawings come in.
- ❑ The work by Linda Bagby, Cat James, and Jim Kilmer and Co. in locating equipment in the facility has been of the utmost help in working with CMT to prepare the plans for the platform and electrical service panel and transformer locations, etc., as well as more general features of the design. I appreciate their efforts greatly.